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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/501,112

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Robert J Benkowski

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LOCKE LORD BISSELL & LIDDELL LLP

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EXAMINER

EVANISKO, GEORGE ROBERT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/501,112	Applicant(s) BENKOWSKI ET AL.	
	Examiner George R. Evanisko	Art Unit 3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 19-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 is in the passive voice and it is unclear if any positive method step recitation is being recited. It is suggested to use active voice, such as "separating and isolating the diastolic flow rate from a pump systolic flow rate and mean flow rate".

In claims 22 and 23 it is unclear what element is performing the functions of separating and extracting since the claim has not set forth an element to perform the function. In addition, in claim 22, the systolic flow rate has not been previously sensed to separate/extract a signal separately from it.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5, 7, 8, 10, 11, 14, 15, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagyszalancyzy et al (6048363). Nagyszalancyzy discloses a blood pump that uses a sensor to continuously monitor a pump parameter during systole and diastole.

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Nagyszalancyzy monitors/extracts (computes, determine by calculation, pulls out, etc) the flow rate from the sensor signal to increase or decrease the pump speed based on the flow rate to achieve the proper pump operating point (e.g. columns 14-16, table 1, figures 22 and 23, etc.). Therefore Nagyszalancyzy will monitor/extract diastolic pump flow rate contribution below a mean flow rate and change the speed in response to the flow since he measures the flow rate all through diastole, both above and below the mean diastolic flow rate. For claims 14, 15, 19, and 20, Nagyszalancyzy describes (e.g. columns 13-15) the use of setting the predetermined speed in accordance with activities such as sleeping and the implantable pressure sensor. NOTE--the claims do not state that the mean flow rate is calculated based on the flow rate signal (or something similar) and that the predetermined speed is changed based on the calculated mean flow rate. Finally, the definition of "extract" can mean several things, such as "to compute", "to draw forth", "to determine by calculation", "to select and copy out", "to pull something out", "to obtain something from a source", "to calculate a value", etc., which Nagyszalancyzy meets. Please see the dictionary definitions from such sources as Merriam-Webster.com or from the MSN Encarta online dictionary.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 4, 6, 9, 12, 13 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagyszalancyzy. Nagyszalancyzy discloses the claimed invention except for monitoring the heart rate and changing/increasing the pump speed also in response to the changing/increasing heart rate and isolating/extracting/separating the diastolic flow rate from the other flow rates. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the pump system and method as taught by Nagyszalancyzy, with monitoring the heart rate and changing/increasing the pump speed also in response to the changing/increasing heart rate and isolating/extracting/separating the diastolic flow rate from the other flow rates since it was known in the art that pump systems and methods monitor the heart rate and change/increase the pump speed also in response to the changing/increasing heart rate in order to provide the predictable results of a conventional and easily implemented way to monitor the patients increased demand and provide the proper amount of pressure/flow/pumped blood to the patient based on the patients increased activity, such as exercising, walking, etc and since it was known in the art for pumping systems to isolate/extract/separate the diastolic flow rate from the other flow rates to provide the predictable results of operating the pump differently during diastole versus systole to accurately and efficiently meet the hearts changing needs and demand.

Response to Arguments

Applicant's arguments filed 6/20/08 have been fully considered but they are not persuasive. The use in claim 1 of "wherein the diastolic pump flow rate is an isolated flow contribution below a mean flow rate" has been considered but Nagyszalanczy still meets this claim limitation. This claim limitation does not state that the diastolic pump flow rate is isolated or separated from other signals, but just "defines" what the diastolic pump flow rate is---a contribution below a mean flow rate. Since Nagyszalanczy uses a sensor to continuously monitor a pump parameter during both diastole and systole and then determines/monitors/extracts the flow rate signal from the sensor signal to adjust the pump, he meets the limitation of the claim. NOTE--the claim is an open-ended comprising claim and does not preclude the pump from also using/extracting the systolic flow rate from the blood flow rate sensor signal and using it in the calculation. It is suggested the claims describe how the diastolic mean flow rate is calculated or separated out (similar to claims 21-23) and how that calculated flow rate is used with the sensed flow rate to change the pump speed (based on support from the disclosure). In addition, the prior art cited with this action shows the well known use of isolating/extracting/separating the diastolic flow rate from the other flow rates

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Evanisko whose telephone number is 571 272 4945. The examiner can normally be reached on M-F 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571 272 4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George R Evanisko/
Primary Examiner
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GRE 9/21/08

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